



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
NATIONAL VEHICLE AND FUEL EMISSIONS LABORATORY
2565 PLYMOUTH ROAD
ANN ARBOR, MICHIGAN 48105-2498

OFFICE OF
AIR AND RADIATION

March 27, 2000

Dear Manufacturer:

CCD-00-02 (LDV/LDT/SM/ICI)

Subject: Revision of EPA Test Request Sheet

This letter transmits a revised EPA Test Request Sheet which should be used for all 1999 and later emission-data vehicles, running change vehicles, and fuel economy data vehicle packages effective immediately. This format is basically the same as provided in VPCD-99-06, April 22, 1999 with minor changes explained below and a change in twin roll coastdown testing protocol.

The change in twin roll coastdown protocol was previously transmitted to the CAP 2000 industry work group in an August 10, 1999 memo from Dennis Pawlac, Ford representative on that work group.

Explanation of the updated Test Request Form:

The top part of the form gives information about the test vehicle. There were two minor changes to this part of the form which was to add the term (Track) under Target coefficients of the coast down vehicle and to lengthen the lines where information would be written for both the Set coefficients and Target (Track) coefficients.

The lower portion of the form shows the coast down data, the fuel economy test numbers and results, the manufacturers confirmatory testing criteria, the manufacturers test procedures and the EPA review criteria. We have added a space for the US06 test number assigned by the EPA CFEIS data base. We have further defined Coast Down Data as "Twin Roll Coast Down Data". Under the heading of "Manufacturer Confirmatory Testing" we have added Twin Roll Coast Down Time 105% to 107%. If the coast down time of the manufacturers test vehicle is between 105% and 107%, the manufacturer should repeat the coast down on the same dynamometer and clearly indicate both coast down times (original and retest) in the space provided on the EPA Test Waiver Sheet. EPA will review the waiver sheet following CAP 2000 protocol.

Coastdown Protocol Changes:

Coastdown tests should be performed after each highway test for both single roll electric and twin roll hydrokinetic dynamometers.

For single roll dynamometer tests, (excluding cold CO tests) manufacturers should list on the EPA Test Request, the a, b, c, factors for the test vehicle (commonly called the dynamometer set coefficients) and the a, b, c, factors for the road force equation (commonly called the target or track coefficients).

For single roll dynamometer tests, manufacturers should not list the actual and target coastdown times and (actual ÷ target) percent, as are required for twin roll dynamometers. Additional guidance regarding the quick check process and tolerances for single roll electric dynamometers is contained in VPCD-98-16, December 21, 1998.

For twin roll dynamometer tests, manufacturers should list on the EPA Test Request the dynamometer horsepower, the actual coastdown time of the test vehicle, the target coastdown time of the coastdown vehicle, and the (actual ÷ target) percent.

If the (actual ÷ target) percent of the manufacturers test is above 107%, manufacturers should proceed according to the guidelines provided in A/C 55C paragraph V D.3. [There is no change to EPA policy.] As described in A/C 55C, manufacturers may 1) repeat the coastdown quick-check on the same dynamometer or 2) void the emission and fuel economy results of the first city and highway tests and perform a second set of city and highway tests on a different dynamometer. If the second quick-check is less than 107 percent, the vehicle is deemed to have passed the quick-check criteria and the data may be submitted to EPA. If the second quick-check is equal to or greater than 107 percent, the vehicle is deemed to have failed and manufacturers should proceed according to the guidelines provided in A/C 55C paragraph VI. This failing data should not normally be submitted to EPA on an EPA Test Request.

If the (actual ÷ target) percent is between 105% and 107% the emissions and fuel economy data are in question. For these questionable (105 to 107 percent) tests, manufacturers should repeat the coastdown on the same dynamometer and clearly indicate both coastdown times (original and retest) on the EPA Test Request sheet. If the retest is between 105 and 107 percent, manufacturer confirmatory testing will be required for both the city and highway tests and this should be indicated on the EPA Test Request form in the space provided. [Eldert Bontekoe and Linda Hormes of my staff, agreed to these changes in a CAP 2000 work group meeting held on August 5, 1999.]

The rest of the testing process follows standard CAP 2000 protocol as described in VPCD-99-06, page 6 of the enclosure. Please note that manufacturer confirmatory tests should not normally be performed until after EPA has reviewed the test request sheet for EPA confirmatory testing (for random audit and new engine/new technology).

Items that did not change from the previous Test Request Form:

Under the Twin Roll Coast Down data is the section showing the test numbers and fuel economy results of testing at the manufacturers facility. Please note that the combined mpg may be left blank on light-duty truck testing. Also do not list the fuel economy or combined mpg if the fuel economy data will not be used for a fuel economy label or CAFE (e.g. some manufacturers are not using the

fuel economy mpg values from phase II fuel tests). This information has not changed from the previous letter and is left in to serve as a reminder.

There were no changes to the Manufacturer Test Procedures section of the form. Please check off all that apply to the subject test vehicle. Also note that under the Arrival Date we have indicated when each confirmatory vehicle should arrive at EPA, which is at 8am at least three working days prior to the scheduled test date. Manufacturer guidance letter VPCD-98-07 outlined this policy.

The instructions for filling out the form are on the reverse side of the form. We have alphabetized the instructions to help in locating the information.

If you would like an electronic copy of the file or have any question about this form, please contact your certification representative.

Sincerely,

A handwritten signature in black ink, appearing to read 'Gregory A. Green', written over the printed name.

Gregory A. Green, Director
Certification and Compliance Division
Office of Transportation and Air Quality

Enclosures

CAP 2000 Test Request

Manufacturer _____
 Vehicle ID _____
 Test Group _____
 Engine Family _____
 Evap Refueling _____
 Family _____
 Carline Name _____
 Standards _____
 Test Type _____
 Vehicle Class _____

Model Year _____
 Configuration _____
 Engine Code _____
 R/C# _____
 Trans. Type _____
 Mode _____, SIL _____
 Fuel: Indolene ☐, Phase II ☐
 Fan Placement: _____
 City: _____
 Hwy.: _____
 Other _____

N/V _____ ETW _____
 Tires _____
 A/C _____
 (Twin roll) DPA: hp _____
 (Single roll) DPA: Set Coefficients:
 (Test vehicle)
 a: _____ b: _____ c: _____
 Target (Track) Coefficients:
 (Coast down vehicle)
 a: _____ b: _____ c: _____

Manufacturer Test Results			Federal		California			
	<u>Cert</u> 50K	<u>Std</u> 50K	<u>Cert</u> U/L	<u>Std</u> U/L	<u>Cert</u> 50K	<u>Std</u> 50K	<u>Cert</u> U/L	<u>Std</u> U/L
<u>NMHC</u>	_____	_____	_____	_____	_____	_____	_____	_____
<u>CO</u>	_____	_____	_____	_____	_____	_____	_____	_____
<u>NOx</u>	_____	_____	_____	_____	_____	_____	_____	_____
<u>2D Evap</u>	_____	_____	_____	_____	_____	_____	_____	_____
<u>Cold CO</u>	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____

New Engine / Technology ☐ Yes ☐ No

Selected for Mfr. Testing

☐ City ☐ Hwy ☐ US06 ☐ SC03 ☐ EVAP 2D /3D ☐ ORVR ☐ Cold CO

Twin Roll Coast Down Data

Actual CD Time = () x 100 = _____ %

%

Target CD Time () (original) (retest)

City Test # FE* Hwy Test # FE* Evap. Test# US06

1. _____ Test#

2. _____

Combined MPG* _____ (Pass. Cars Only)

* Do not list FE, or combined mpg, if data will not be used for FE

label or CAFE

Manufacturer Confirmatory Testing

Yes No

Failure or replacement for failed vehicle ☐ ☐

High Emission levels ☐ ☐

Higher than expected fuel economy ☐ ☐

Potential Gas Guzzler ☐ ☐

Fuel Economy > Fuel Economy of Leader ☐ ☐

Twin Roll Coast Down Time 105% to 107% ☐ ☐

Comments: _____

Manufacturer Test Procedures

FTP ☐ Single Roll Dyno ☐ Precon. Can. 2D/3D ☐
 HWY ☐ Twin Roll Dyno. ☐ Cold CO ☐
 CST ☐ 2-D Evap. ☐ SC03 ☐
 3-D Evap. ☐ SC03 (AC1) ☐
 US06 ☐ SC03 (AC2) ☐
 Other _____

Arrival Date at EPA _____

(8am, 3 working days prior to the scheduled test)

Mfr. Signature _____

Phone #: _____

EPA Review Criteria

City Hwy City Hwy
 Random ☐ ☐ New engine/Tech. ☐ ☐
 Defeat Device ☐ ☐ Other ☐ ☐

EPA Testing Decision

FTP ☐ EVAP (2D/3D) ☐ US06 ☐
 HWY ☐ Precond. Can. (2D/3D) ☐ SC03 ☐
 CST ☐ Cold CO ☐ SC03 (AC1) ☐
 OBD ☐ Single roll Dynamometer ☐ SC03 (AC2) ☐
 ORVR ☐ Other _____

EPA Testing Waived ☐, Test @ EPA ☐ Test Date _____

EPA Signature _____ Date _____

Test Request Instructions

Arrival Date at EPA

Enter the date that the vehicle will arrive at EPA ready for testing. (ref. VPCD-98-07-3 working days prior to scheduled test date)

Carline name

Enter the actual carline name, not the numerical code.

Cert. 50K

Enter the 50,000 mile certification test levels (with DF applied).

Cert. U/L

Enter the full useful life certification level (with DF applied).

Configuration

Enter the configuration number from EPA's data base.

Combined FE

Enter the harmonically averaged fuel economy for this city and highway test combination.

Comments

Enter descriptions of new vehicles, running changes and any additional pertinent information. Indicate the current vehicle configuration when submitting multiple versions of the same vehicle that require hardware changes between tests. (e.g. tires, axle, computer chips, etc.) Fill out 2 separate Test Request forms if an enhanced evap test was performed. Place the 2-day evap results on the first TR with corresponding FTP and the 3-day evap and FTP on the second TR. Anytime this vehicle gets a preconditioned canister test (even when no enhanced evap test is performed) provide extra canisters if needed, canister specifications (i.e. Canister volume, working capacity, loading rate, etc.) and evap purging and loading schematics.

DPA: hp

Enter the twin roll dynamometer horsepower

DPA: Set Coefficients

(Test vehicle)

If a single roll dynamometer was used in testing, write in the values for each coefficient a, b and c. (a) is pound force by taking gravity into account. (b) is pound force divided by mile per hour. (c) is pound force divided by mile per hour squared.

Target (Track) Coefficients:

(Coast Down vehicle)

Write in the target coefficients of the coast down vehicle.

Engine Code

Enter the engine code.

Engine Family

Enter the engine family name.

Emission values

Write in the certification levels and standards for all applicable emissions, using **other emissions** listed on this page.

ETW

Enter the equivalent test weight.

Evap. Refueling Family

Enter the evaporative refueling family name.

Fan Placement

Please provide the number and location of fans necessary for the city and highway test only. For example: One centered front fan, in up position on the city and highway tests.

FE

Enter the city, highway and combined fuel economy mpg associated with the preceding city and highway test number; if it will be used for fuel economy labels or CAFE. List combined mpg for light-duty vehicles only (not light-duty trucks).

Fuel Economy:

City Test # / Hwy. Test

Enter the city and highway test numbers assigned by CFEIS for all testing.

Fuel

Indolene (EPA unleaded test fuel)

Phase II

Enter the following in other:

Diesel CNG

M85 E85

M10 E10

ETC.

Manufacturer

Enter the manufacturer name, not code.

Manufacturer's test results

Federal or California

Enter data under applicable sales area, Federal and / or California.

MFR Signature

Signature of manufacturer representative who can be contacted if necessary.

MFR Test Procedures

Mark all test procedures performed on this vehicle/version combination. If preconditioned canister is marked, see instructions under comments. If other is marked, write in the test procedure.

Mode

Power

Economy

Other

Model Year

Enter the represented model year of the test vehicle.

New Engine / Technology

Does the vehicle have a new engine or engine control system technology? Describe in comments.

N/V

Enter the N/V (engine rpm divided by vehicle speed in the highest transmission gear)

Other Emissions

NMOG

THC

Evap. 2-day (HS+ Diurnal)

Evap. 3-day (HS+ Diurnal)

running loss

Spitback

PM

OMHCE

OMNMHCE

Cert Short Test

Idle CO

Hwy Nox

Other

R/C

Enter the running change number if applicable.

Selected for Mfr. Testing

The manufacturer must check the appropriate testing box under "Selected for Mfr. Testing", for each different test procedure they will perform at their facility in the confirmatory process, due to a yes check for any of the criteria listed under "Manufacturer Confirmatory Testing", reference CCD-00-02 and VPCD-99-06.

SIL

Did the test use a shift indicator light? Yes or No.

Standards

Tier 1

TLEV

LEV

ULEV

SULEV

ILEV

ZEV

Std 50K

Enter the appropriate 50,000 mile certification standard.

Std U/L

Enter the appropriate full Useful life certification standard.

Test Group

Enter the test group (CAP 2000 only).

Test Date

When the vehicle will be tested. The vehicle must be at EPA at least three working days prior to the test date; ref VPCD -98-07, May 5, 1998.

Test @ MFR

Mark this if the confirmatory test will be performed by the manufacturer.

Test Type

EDV

FEDV

Tires

Enter the tire make and size.

Trans. Type

Transmission type

A3 M3

A4 M4c

A5 M4

L3 M5c

L4 M5

L5 M6c

Other M6

Twin Roll Coast Down Data

For twin roll dynamometers only, enter the actual coast down time and target coast down time in the spaces provided and the calculated percentage to one decimal place. Enter the calculated percentage of any retests to one decimal place.

Vehicle Class

Two Seater

Mini

Sub Compact

Compact

Mid Size

Large

Small Wagon

Mid Wagon

Large Wagon

Small Pickup

Standard Pickup

Van

Special Purpose:

Minivan

Sport Utility Vehicle (SUV)

Vehicle ID

Enter the vehicle identification number.